MDAExhibitR -2RDT&EBudgetItemJustificat	ion			Date Febru	ary2003							
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOME 0603883 (RE MissileDefenseBoostDefenseSegment									
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009				
TotalPECost	583463	718036	626264	653612	755163	665772	477109	354346				
4030Air -BasedBoost	465194	584916	0	0	0	0	0	0				
0710AirborneLaser(ABL)Block2004	0	0	344500	149500	0	0	0	0				
0810AirborneLaser(ABL)Block2006	0	0	10000	85800	149500	78800	81400	55100				
0910AirborneLaser(ABL)Block2008	0	0	255535	402168	582462	561417	366217	267352				
4020Sea -BasedBoost	30070	0	0	0	0	0	0	0				
4040Space -BasedBoost	23779	0	0	0	0	0	0	0				
4010KineticEnergyBoost	0	91506	0	0	0	0	0	0				
4043SpaceBasedLaser	46248	22856	0	0	0	0	0	0				
4090/0602ProgramOperations	18172	18758	16229	16144	23201	25555	29492	31894				

A.MissionDescriptionandBudgetItemJustification

Note: Severalproject sfundedinearlieryears are no longer funded within this Program Element. Beginning in FY2003, funding for the Space Based Laser program (Project 4043) transitioned to support MDA's Laser Technology Program (aspart of Program Element 0603875C). For F Y2004 - 2009, funding for the Kinetic Energy Boost and Sea and Space Based Boost Programs (Project 4010, 4020 & 4040 in FY2002 - 2003) will transition into the Ballistic Missile Defense System (BMDS) Interceptor Program Element (0603886C), Project 50913 and 0013.

BasedonPresidentialdirection,MDAisdevelopinganinitialdefensiveoperationalcapabilitythatisbasedontheBMDSTestBedandaugmentedwithadditionaldevelopmentassets.MDAwill continuetoemploytheTestBedfortestingbeyondinitia lfieldingtoevolveanintegrated,layeredBallisticMissileDefensecapability.

TheMissileDefenseAgencydevelopstheBallisticMissileDefenseSystem(BMDS)usingbiennialcapabilityblocks. Thisapproachisthemostefficientandeffectivewaytog etmissiledefense assetsintothehandsofthewarfightersasquicklyaspossiblewhileallowingforrapidinsertionofemergingtechnologyinthemostaffordablemanner. These capabilityblocks will subsequently buildonandbeintegrated with the prede cessor blocks. Block capabilities are built by using complete elements and their individual components to integrate a single BMDS and provided a very defense against ballistic missiles during all flight phases, Boost, Midcourse, and Terminal, using multiple ebasing modes and phenomenology.

AspartofthetotalBMDS,theBoostDefenseSegment(BDS)ProgramElement(PE)fundstheBoost -relatedelementportionsofBlocks2004,2006,and2008andotherBoost -relatedmissionarea investmentactivities. TheBMDS elementinthisBoostDefenseSegment, AirborneLaser(ABL), providesacapabilitytodestroyballisticmissilesintheboostphaseoftheirtrajectory, thesegment from postlaunchthroughpropellantburnoutafterwhichthemissileentersthemidcoursep haseofballisticflight. Destroying ballisticmissilesintheboostphaseisimportanttoBallisticMissile Defense(BMD) asthreatscanbenegatedlong beforethey have an opportunity to deployeentry vehicles, submunitions, or countermeasures, and deb risfrom successful engagements can be precluded from affecting protected areas and assets.

ABLwilldesign,buildandtestanair -basedlasersystemtoacquire,track,andkillballisticmissilesintheirboostphase. Theboostphasetypicallyincludes thefirst60 -300secondsofflightand concludesataltitudesbetween 20 -450kilometers. ABLintegratesthreemajorsubsystems(Laser, BeamControl, and Battle Management, Communications, Computers and Intelligence (BMC4I)) into a modified edcommercial Boeing 747 -400 aircraft. ABLalsoincludes ABL -specific ground support equipment. Some of the critical technical challenges to be addressed in the ABLeffort include:

- 1) On-boardsensors,
- Optical coatings,

		Date
MDAExhibitR -2RDT&EBudgetItemJustificat	ion	February2003
APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	0603883CBallisticMissileDefen	seBoostDefenseSegment

- 3) Lightweightflighthardwar eandhighbandwidthadaptiveoptics;
- 4) Commandandcontrol,battlemanagement,andcommunications(C2BMC)development;and
- 5) Developmentofoperational concepts sufficient to support the quick reaction firing of DEweapons.

Earlyproofofprinciplea ctivities includes a lethality demonstration (missiles hoot down). The seactivities will show the feasibility of engaging aballistic missile during the boost phase in a representative environment.

 $The flow-down of BMDS ystem capability specifications \\ resulting from Missile Defense National Team efforts in C2BMC and Systems Engineering \& Integration will guide the integration of the Boost Defense Elements into the BMDS ystem, the BMDS c2BMC architecture, and the BMDT est Bed.$

 $Consistent with the MDAb \\ lockmanagement framework, the Airborne Laser (ABL) System Element of the BDS consists of Blocks 2004, 2006, and 2008: \\$

1)ABLBlock2004 -TheABLinitialdevelopmentcontractwasawardedtotheBoeing/TRW(nowNorthrop -Grumman)/Lockheed-MartinteaminNo vember1996,todesign,fabricate,integrate,and testanABLaircraftwithalaserdevice.TheABLBlock2004(formerlyPDRR)phaseculminatesinalethalitydemonstration(missileshootdown)againstboostingballisticmissilethreat - representativetarge tsanddeliversoneaircraftforintegrationandtestingintheBMDSTestBed.Thisaircraftwillbecapableofprovidingcontingencycapability,ifdirected,thatoffersrudimentary protectionoftheUnitedStates.

2)ABLBlock2006 -Thiseffortwill evaluate the capabilities of the ABLBlock2004 Test Bedagainst the spectrum of threats, including those notoriginally specified in the ABLPDR Reffort. It will also enhance and test the integration of the ABLBlock 2004 aircraft into the BMDS by levera gings of tware and limited hardware changes.

3)ABLBlock2008andfutureblocks -ThiseffortcontinuesthedevelopmentoftheAir -BasedBoostDefensecapabilityconsistentwithBMDSneeds.ItwillincludematurationtoasecondtestABL aircraftthat includesnewtechnologies, withenhancedlethality, and additional operational suitability

ProgramOperationsunderthisprojectcoverspersonnelandrelatedsupportcosts, statutoryandfiscalrequirements. Mayincludefundingforgovernmentciviliansp erformingprogram - wideoversight functionssuchascontracting, programintegration, safety, qualityandmissionassuranceat Missile Defense Agency (MDA); costestimating; audit; technology integrationacrossal IMDA projects; and assessment of schedule, cost and performance, documentation of related programmatic issues and, for eign currency fluctuations on limited number of for eign contracts. Also includes funding for charges on canceled appropriations in accordance with Public Law 101 -510.

B.ProgramC hangeSummary	FY2002	FY2003	FY2004	FY2005
PreviousPresident'sBudget(FY2003PB)	599835	796927	1389817	1399902
CurrentPresident'sBudget(FY2004PB)	583463	718036	626264	653612
TotalAdjustments	-16372	-78891	-763553	-746290
CongressionalSpeci ficProgramAdjustments	0	-60000	0	0
CongressionalUndistributedAdjustments	-4647	-12671	0	0
Reprogrammings	606	-6220	-763553	-746290
SBIR/STTRTransfer	-12331	0	0	0

MDAExhibitR -2ARDT&EProjectJustification				Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY	R-1NOME	ENCLATUR	RE					
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	06038830	CBallisticN	MissileDef	enseBoost	DefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2 009
4030Air -BasedBoost	465194	584916	0	0	0	0	0	0
RDT&EArticlesQty	10	5	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

AIR-BASEDBOOST

The Airborne Laser (ABL) is an element of the Ballistic Missile Defense System (BMDS). ABLBl ock 2004 and ABL Block 2008 designate capability levels. This nomenclature reflects the block designations of the BMDS. ABL will design, build and test an air -based laser system to acquire, track, and kill ballistic missiles in their boost phase. ABL in tegrates three major subsystems (Laser, Beam Control, and Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I) into a modified commercial Boeing 747 -400 aircraft. ABL also includes ABL specific ground support equipment.

Starting in FY 2004, the Missile Defense Agency (MDA) has adopted an ewwork break downstructure (WBS) for all Ballistic Missile Defense System (BMDS) elements to provide greater in sight into funding requirements. Thus, funding requirements for FY 200 4-2009 are now broken into capability blocks. In accordance with this new WBS, Air -based boost has been broken into three Airborne Laser (ABL) capability blocks (ABLBlock 2004 --Project 0710, ABLBlock 2006 --Project 0810, and ABLBlock 2008 --Project 0910).

ABLBlock2004 -TheABLinitialdevelopmentcontractwasawardedtotheBoeing/TRW(nowNorthrop -Grumman)/Lockheed-MartinteaminNovember1996,todesign,fabricate,integrate,and testanABLaircraftwithalaserdevice. TheABLBlock2004 (formerlyPDRR)phaseculminatesinalethalitydemonstration(missileshootdown)againstboostingballisticmissilethreat - representativetargetsanddeliversoneaircraftforintegrationandtestingintheBMDSTestBed. Thisaircraftwillbecapableo fprovidingcontingencycapability, if directed, that offersrudimentary protection of the United States.

RDT&EArticles:

Thetestarticlesassociated with Block 2004 will decrease risk and improve the probability of success for lethal shoot specified:
-downin CY2 004. The following targets will be delivered in the fiscal years

FY2002:

10LanceMissiles.

FY2003:

5LanceMissiles.

ABLBlock2008andfutureblocks -ThiseffortcontinuesthedevelopmentoftheAir -BasedBoostDefensecapabilityconsi stentwithBMDSneeds.ItwillincludematurationtoasecondtestABL aircraftthatincludesnewtechnologies, withen hanced lethality, and additional operational suitability.

Date February2003 MDAExhibitR -2ARDT&EProjectJustification APPROPRIATION/BUDGETACTIVITY R-1NOMENCLATURE ${\bf 4. Advanced Component Development and Prototypes (}$ 0603883 CB all istic Missile Defense Boost Defense SegmentACD&P) **B.**Accomplishments/PlannedProgram FY2005 FY2002 FY2003 FY2004 ABLBlock2004 371562 280200 0 RDT&EArticles(Quantity) 0 0 FY2002Accomplishments: --SuccessfullycompletedLaserModule1Testing. --Deliveredandmountedsurrogatelaserturretandrollshell. --CoatedRangeSimulatorPrimaryMirror. --S tarteddevelopmentalflighttesting. FY2003PlannedAccomplishments: --Delivertargetandbeaconilluminatorlasers. --CompleteintegrationandtestofBeamTransferAssemblyandturretball. --Successfullycompletesurveillancedemonstrationwithout theActiveRangerSystem. --Producefirstlightwithhigh -energylaseratthesystemintegrationlaboratory(SIL). FY2002 FY2004 FY2003 FY2005 ABLBlock2008 11175 236747 0 RDT&EArticles(Quantity) FY2002Accomplishment: --Startedacq uisitionoflongleadoptics. FY2003PlannedAccomplishments: --Continueacquisitionoflongleadoptics. --Initiatepaymentsforcommercial "green" 747 -400aircraft. --AwardABLBlock2008contract,beginABLBlock2008development,andbegin"IronB ird"hardwareacquisition. FY2002 FY2003 FY2004 FY2005 **GovernmentActivities** 82457 67969 0

D	DТ	Q-,	ᄗᄾ	***	പ	00

RDT&EArticles(Quantity)

Thetestarticles associated with Block 2004 will decrease risk and improve the probability of success specified:

for lethal shoot >>> -down in CY 2004. The following targets will be delivered in the fiscal years

Project:4030

10

		Date
MDAExhibitR -2ARDT&EProjectJustification		February2003
APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	0603883CBallisticMissileDefens	seBoostDefenseSegment
FY2002:		
10LanceMissiles.		
FY2003:		
5LanceMissiles.		

C.OtherProgramFundingSummary

C.Other Program Funding Summary										
	EX/2002	EN/2002	EN/2004	EN/2005	EN/2006	EM2007	EN/2000	EN/2000	То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallis ticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTes t andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		

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MDAEx	thibitR -2Al	RDT&EPro	jectJustifica	ntion			Date February	2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopment	&P)		MENCLATU 83CBallistic		fenseSegme	nt				
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE090158 5CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		

D.AcquisitionStrategy

TheflowdownofBMDSystemcapabilityspecificationsresul	tingfromMissileD	${\it DefenseNationalTeameffortsinC2BMC} and {\it SystemsI}$	Engineering&Integrationwillguidetheintegrationofthe
ABL system into the BMDS ystem, the BMDS C2BMC architecture and the bar of	e,andtheBMDSTe	stBed.TheABLsystementeredintoaprogramdefi	nitionandriskreductioncontractinNovember1996.
Majorsubsystemdevelopment, integration, and testing are project	edtocontinueinFY	2003. The program planis structured to demonstrate tec	hnicalachievementsthroughoutthepreliminarydesign
andri skreductionphase, culminating in alethality demonstration	Thiscapability	-basedprogramtakesaspiraldevelopmentapproach	ntoward fielding an ABLS ystem. The approach takes advantage
ofproducingalineofABLsystemsthatsystematicallyandincreme	ntallyaddsm	orecapabilityasthetechnologymatures.	

	MDAE	THE SPECIAL SP	3D :4C	4 4 1				Dat		.03		
: TOP OPPLY MICH (DID CET		xhibitR -3RDT&E	ProjectCo	ostAnalys		TENIOL A		Fer	bruary200	<u>J3</u>		
APPROPRIATION/BUDGET			TO O D)			MENCLAT		D CD	4D - C	C4		ľ
4.AdvancedComponentDe		andPrototypes(AC	D&P)		000387	83CBallis	ticiviissiie	Derenseb	JostDeien	nseSegment		
I.ProductDevelopmentCost(\$in7		T D C :	T (1		T EX/2002		T EX2004		T EX2005			
	Contract	Performing	Total	EX2002	FY2003	E372004	FY2004	E370005	FY2005	0 -44-5	T-4-1	Target
G (G)	Method	Activity&	PYs Cost	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ABLBlock2004	<u>'</u>	D : D-f	 '	 	 	<u> </u>	 	 '	 	 		
	'	BoeingDefense& Space	1 '	'	'			'		'	1	, ,
ABLBlock2004Contract	C/CPAF	Group/Seattle,WA	1 '	280200	1/4Q			'		'	280200	, ,
ABLBlock2008	+	+		+				+ + + + + + + + + + + + + + + + + + + +		 		
		BoeingDefense&						†		†		, ,
		Space	1 '		'			'		'		, ,
ABLBlock2008	SS/CPAF	Group/Seattle,WA	<u> </u>	236747	4Q	<u> </u>	236747					
SubtotalProductDevelopment Remarks	'		0	516947	<u></u> '	0		0	<u> </u>		516947	
II.SupportCostsCost(\$inThousa			T	T		т	T===2004		T=========	1		
1	Contract	Performing	Total		FY2003		FY2004		FY2005	- '		Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ABLBlock2004	<u> </u>	ļ <u>'</u>	 	12000	1//0	<u> </u>	<u> </u>	<u> </u>		<u> </u>	12000	·
ABLTechnicalSuptContracts	Various	Various	 	13800	1/4Q	<u> </u>	<u> </u>	<u> </u>		<u> </u>	13800	<u> </u>
ABLGovernmentandother Supt	Various	Various	1	15871	1/4Q				1	'	15871	, ,
ABLBlock2008	Various	v arrous	 '	150/1	1/40	 	 	 	 	 '	130/1	
ABLBlock2008	Various	Various	 '	500	1/4Q	 	 		 	 '	500	
ABLBlock2008	Various	Various	 '	1098	1/4Q 1/4Q	 	 	 	 	 	1098	
SubtotalSupportCosts	Various	v arrous	0	31269	1/70	0	 	0	 	 '	31269	1
Remarks				31207					<u> </u>		J1207	-
Numeroussupportcontractsandtype	eswithvarious?	awarddates.										
1												
1												
1												

								Da				
		xhibitR -3RDT&E	ProjectC	ostAnalys				Fe	bruary20	03		
APPROPRIATION/BUDGET						MENCLA						
4.AdvancedComponentDe		andPrototypes(AC	D&P)		06038	83CBallis	ticMissile	DefenseB	oostDefen	seSegment		
III.TestandEvaluationCost(\$in7		·		1		1		1			-	
	Contract	Performing	Total		FY2003		FY2004		FY2005	_	[Target
_ ~ .	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ABLBlock2004												
TestInstruments	Various	Various		8000	1/4Q						8000	
Targets	MIPR	USASMDC/Huntsv illeAL		6500	1/4Q						6500	
IntegratedTestForce	MIPR	AFFTC/Edwards AFB		17200	1/4Q						17200	
LFT&E	Various	Various		5000	1/4Q						5000	
SubtotalTestandEvaluation			0	36700		0		0			36700	
IV.ManagementServicesCost(\$i	Contract Method	Performing Activity&	Total PYs	FY2003	FY2003 Award	FY2004	FY2004 Award	FY2005	FY2005 Award	Costto	Total	Target Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
SubtotalManagementServices												
Remarks ProjectTotalCost			0	584916		0		0			584916	
Remarks	I	I I		<u>I</u>		l		1	<u> </u>			

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UNCLASSIFIED

M	MDAExhibitR -4ScheduleProfile											Date February2003																				
APPROPRIATION/BUDGETACTIVITY												R-	1NC	ME	NCI	LAT	ΓUR	Е														
4.AdvancedComponentDevelopmenta	ndF	Prot	oty	pes(AC	D&	P)					06	038	83C	Ba	llist	ticN	Iiss	ileD	efe	nsel	Boo	stD	efer	nseS	Segr	nen	ıt				
FiscalYear		20	002			20	03			200	04			200	05			20	06			20	07			20	800			200	9	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3 4	7
Block2004																																
FirstLightatSystemIntegrationLab								Δ																								1
Block2008																																
BeginIronBirdhardwareacquisition								Δ																								1
ContractAward								Δ																								1
Initiatepaymentsforcommercial'green'								Δ																								1
747-400																																
Startacquisitionoflong-leadoptics]

MDAE	ExhibitR -4AS	cheduleDetail			Da Fe	te bruary2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPr	ototypes(ACD	0&P)		MENCLATURE 3 CBallisti cM	issileDefenseB	SoostDefenseS	egment	
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2004								
Completeintegration/testofBTAandTurretBall		3Q						
FirstLightatSystemIntegrationLab		4Q						
Block2008								
BeginIronBirdhardwareacquisition		4Q						
ContractAward		4Q						
Initiatepaymentsforcommercial'green'747 -400		4Q						
Startacquisitionoflong -leadoptic s	4Q							

MDAExhibitR -2AR DT&EProjectJustification	1			Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY	R-1NOME							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	06038830	Ballistic	MissileDef	enseBoost	DefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0710AirborneLaser(ABL)Block2004	0	0	344500	149500	0	0	0	0
RDT&EArticlesQty	0	0	3	2	0	0	0	0

A.MissionDescriptionandBudgetItemJustificatio n

ABLBlock2004

The ABL initial development contract was awarded to the Boeing/TRW (now Northrop with a laser device. The ABL Block 2004 (formerly PDRR) phase culminates in a lethality demonstration (missiles hoot down) against boosting ballistic missile threat representative targets and delivers one aircraft for integration and testing in the BMDS Test Bed. This aircraft will be capable of providin gcontingency capability, if directed, that offers rudimentary protection of the United States.

RDT&EArticles:

ThetestarticlesassociatedwithBlock2004willdecreaseriskandimprovetheprobabilityofsuccessforlethalshoot -downinCY2004.The followingtargetswillbedeliveredinthefiscalyears specified:

FY2004:

3ForeignMilitaryAssets.

FY2005:

2ForeignMilitaryAssets.

B.Accomplishments/PlannedProgram

B. Accomplishments/PlannedProgram				
	FY2002	FY2003	FY2004	FY2005
ABLBlock2004			260200	97000
RDT&EArti cles(Quantity)				

FY2004/2005PlannedProgram:

ContractorIntegrationandTest --ContinueBoeing/TRW(nowNorthrop -Grumman)/Lockheed-MartinBlock2004programcontracteffortforintegrationandtestingtheABLsystem,includingpost lethalitydemons trationactivitiesinFY2005.

FY2002Accomplishments:

--ThisprojectisacontinuationoftheABLBlock2004effortdescribedunderProject4030.PleaserefertoFY2002ABLBlock2004accomplishmentslistedunderProject4030.

FY2003PlannedAccom plishments:

--ThisprojectisacontinuationoftheABLBlock2004effortdescribedunderProject4030.PleaserefertoFY2003ABLBlock2004plannedaccomplishmentslistedunderProject4030.

FY2004PlannedAccomplishments:

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Date February2003 MDAExhibitR -2AR DT&EProjectJustification APPROPRIATION/BUDGETACTIVITY R-INOMENCLATURE 0603883 CB all istic Missile Defense Boost Defense Segment4. Advanced Component Development and Prototypes (ACD&P)--CompleteABLBlock200 4groundtestingtoincludefirstlightontheABLBlock2004aircraft.

- --FirstflightofthecompleteABLBlock2004weaponsystem.
- --Successfultrackandhighenergylaserengagementofaninstrumentedmissilealternative.

FY2005PlannedAccomplishme nts:

- --Completelethalitydemonstrationagainstaboostingballisticmissile.
- --Conductpost -shootdownflighttesting.

	FY2002	FY2003	FY2004	FY2005
GovernmentActivities			84300	52500
RDT&EArticles(Quantity)			3	2

FY2004/2005PlannedProgram:

Continuepurchaseoftestinstruments, conducttestactivities at Edwards AFB, performle thality assessments on ABL target sets, performmodeling and simulation activities, support development of BMDSspecificationsandplans, and acquire advisory and as sistanceservices. Continue government operations and support for labor, training, travel, and equipment.

FY2004PlannedAccomplishments:

- -- Launch.recover.andrefurbishaninstrumentedmissilealternative
- --Completeopticalfaultsystemmanagertool
- --DeliveratmosphericdecisionaidtosupportABLtesting

FY2005PlannedAccomplishments:

- --CompletepreparationsforAFLink -16testing
- --Complete preparations for system level capability specification verification

RDT&EArticles:

Thetestarticle sassociated with Block 2004 will decrease risk and improve the probability of success for lethal shoot specified:

-downinCY2004. The following targets will be delivered in the fiscal years

FY2004:

3ForeignMilitaryAssets.

FY2005:

2ForeignMil itaryAssets.

Date MDAExhibitR -2AR DT&EProjectJustification February2003 APPROPRIATION/BUDGETACTIVITY R-1NOMENCLATURE 4. Advanced Component Development and Prototypes (ACD&P)0603883 CB all istic Missile Defense Boost Defense SegmentC.OtherProgramFundingSummary To Total FY2002 FY2003 FY2004 FY2005 FY2006 FY2007 FY2008 FY2009 Complete Cost PE0605502CSmallBusinessInnovative Research - MDA PE0901585CPentagonReservation PE0901598CManagementHeadquarters -MDA PE0604867CNavvAreaTheaterMissile Defense -EMD PE0603880CBallisticMissileDefense SystemSegment PE0603881CBallisticMissileDefense TerminalDefenseSegment PE0603882CBallisticMissileDefense MidcourseDefenseSegment PE0603884CBallisticMissileDefense Sensors PE0603886CBallisticMissileDefense SystemInterceptors PE0603890CBallisticMissileDefense SystemEngineeringandIntegration PE0603888CBallisticMissileDefenseTest andTargets PE0603889CBallisticMiss ileDefense Products PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD PE0603879CAdvancedConcepts. **Evaluations and Systems** PE0603869CMeadsConcepts -Dem/Val PE0603175CBallisticMissileDefense Technology

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MDAExhibitR -2AR DT&EProjectJustification APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	r cor uar y 2003
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	0603883CBallisticMissileDefen	seBoost DefenseSegment
D.AcquisitionStrategy	VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	beboost democratical
thm:prop:prop:prop:prop:prop:prop:prop:pro	atemphasizestesting,spiraldevelopment,and	devolutionaryacquisitionthroughtheuseoftwo -
The Airborne Laserentere dinto a program definition and risk reduction contract in November 1996. Develop to demonstrate technical achievements throughou the preliminary design and risk reduction phase, culm approach towards fielding an ABL system. It lever a gest he use of two testair craft (Block 2004 and Block producing a line of ABL sthat systematically and incrementally adds more capability as technology matures. capabilities during the development phase. ABL Block 2004 and the "Iron Bird" will integrate and test key technology and the capabilities of the ABL Block 2004 Test Bedagain software and limited hardware changes.	natinginalethalitydemonstration.Thiscapa 2008)andaground -basedtestfacilit ThisstrategyproducesABLBlock2004,ABI hnologies,allowingimprovedcapabilitiesan	bility -basedprogramtakesaspiraldevelopment y("IronBird").Theapproachtakesadvantageof LBlock2006,andAB LBlock2008 Idintegrationofmaturingtechnologiesin

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APPROPRIATION/BUDGET		xhibitR -3RDT&E	ProjectC	ostAnaiys		MENCLA	TIIDE	re	bruary200	03		
4.Advanced Component		tandPrototynes(A)	CD&P)					DofoncoR	oost Defen	seSegment		
_		tanui Tototypes(A)	CD&I)		00030	oscbains	HCIVIISSIIC.	Detensen	oostDetell	sesegment		
I.ProductDevelopmentCost(\$in	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ABLBlock2004	Corppe			0000	2		2	0000	2	Compiete	0050	
	C/CPAF	BoeingDefense& Space Group/Seattle,WA				260200	1/4Q	97000	1/4Q		357200	
SubtotalProductDevelopment			0	0		260200		97000			357200	
II.SupportCostsCost(\$inThousa						T						
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
GovernmentActivities												
TechnicalSupportCosts	Various	Various/Various				14140	1/4Q	7530	1/4Q		21670	
GovernmentandOtherSupport	Various	Various/Various				40160	1/4Q	23970	1/4Q		64130	
SubtotalSupportCosts			0	0		54300		31500			85800	İ
Remarks III.TestandEvaluationCost(\$in'	Thousands) Contract	Performing	Total		FY2003	T	FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
GovernmentActivities	1									•		
IntegratedTestForce	MIPR	AFFTC/Edwards AFB				25000	1/4Q	16000	1/4Q		41000	
LFT&E	Various	Various/Various				5000	1/4Q	5000	1/4Q		10000	·—
SubtotalTestandEvaluation			0	0		30000		21000			51000	i
Remarks					-							

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	MDAEx	khibitR -3RDT&E	EProjectC	CostAnalys	sis			Dat Fel	te bruary20(03		
APPROPRIATION/BUDGETA)MENCLA	ΓURE					
4.Advanced ComponentD	evelopment	tandPrototypes(A	CD&P)		06038	83CBallis	ticMissile	DefenseB	oostDefen	seSegment		
IV.ManagementServicesCost(\$in												
	Contract	Performing	Total		FY2003		FY2004		FY2005	'	1	Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Туре	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
SubtotalManagementServ ices				<u> </u>								
Remarks												
ProjectTotalCost			0	0		344500		149500			494000	
Remarks												

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N	IDA:	Exh	ibit	R ·	-4Se	che	dule	Pro	file												Dat Fel		ary	20 0)3								
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)													URE c M i	issile	Def	ens (еВс	os	tl	Def	ens	seSe	gn	1en	t								
FiscalYear		20	02			20	003			20	004			20	005			200	6			20	07			2	200	18			200	09	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Ľ	2	2	3	4	1	2	3	4
TestingMilestones																																	
CompleteGroundTesting											Δ																						
Conductpost-LethalityDemoflighttesting LethalityDemo													\	Δ															$\frac{1}{2}$				

MD	AExhibitR -4AS	cheduleDetail			Dat Fe	bruary2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentand	Prototypes(ACL	0&P)		MENCLATURE 3CBallisticMi	ssileDefenseB	oostDefenseSe	egment	
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TestingMilestones								
CompleteGroundTesting			3Q					
Conductpost -LethalityDemoflighttesting				2Q				
LethalityDemo				1Q				

MDAExhibitR -2ARDT&EProjectJustification				Date Febru	ary2003			
	R-1NOME 06038830		_	enseBoost	tDefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0810AirborneLaser(ABL)Block2006	0	0	10000	85800	149500	78800	81400	55100
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

ABLBlock2006

This effort will evaluate the capabilities of the ABL Block 2004 Test Bedagainst the spectrum of threats, including those notoriginally stest the integration of the ABL Block 2004 air craft into the BMDS by leveraging software and limited hardware changes.

pecifiedintheABLPDRReffort.Itwillalsoenhanceand

B.Accomplishments/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
ABLB lock2006			9600	53000
RDT&EArticles(Quantity)				

FY2004/2005PlannedProgram:

WeaponSystemDevelopment --StartBlock2006effortincludingenhancementstothecapabilitiesofBlock2004leveragingsoftwareandlimitedhardwarechanges.Candida includeimprovementsinBMC4I,interoperability,pointingandtracking,andtargetengagement.

teenhancementscould

FY2004PlannedAccomplishments:

- --Awardfirsttaskorder
- -- Start de signands of tware de velopment of first task order for en hance dBMC4

Icapability.

--Conductdown -selectofadditionalenhancementoptions.

FY2005PlannedAccomplishments:

- --ConductdemonstrationsofenhancedBMC4Icapabilitiesingroundtestfacility.
- --Awardadditionalenhancementtasks.
- --Conductdesignandtestof additionalenhancements.

| Date | |

FY2005PlannedProgram:

ContractorIntegrationandTest --BeginevaluationofABLBlock2004TestBedcapabilitiesagainst thespectrumofthreatsanditsintegrationintotheBMDS.Beginintegrationofcandidate capability/supportability/deployabilityenhancementsandfundBlock2004post -developmentflighttestoperationsandsustainment.

FY2005PlannedAccomplishments:

--Awardtaskorderforandconductpost -developmentflighttestingandaircraftsustainment.

	FY2002	FY2003	FY2004	FY2005
GovernmentActivities			400	10800
RDT&EArticles(Quantity)				

FY2004/2005PlannedProgram:

ContinuetestactivitiesatE dwardsAFBandacquireadvisoryandassistanceservices.Continuegovernmentoperationsandsupportforlabor,training,travel,andequipment.

C.OtherProgramFundingSummary

ovo viori i rogi umi umamgo umima, y									То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseA cquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		

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MDAEx	khibitR -2AF	RDT&EPro	jectJustifica	tion			Date February2003						
APPROPRIATION/BUDGETACTIVITY				R-1NO	MENCLATU	RE							
4.AdvancedComponentDevelopment	andPrototyp	es(ACD&	&P)	060388	0603883 CB all is tic Missile Defense Boost Defense Segment								
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472					
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0					
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484					
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0					
PE0603881CBallisticMissileDefe nse TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649					
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923					
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906					
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096					
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501					
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396					

D.AcquisitionStrategy

The Airborne Laser will follow the Missile Defense Agency's capability year capability blocks. -baseda cquisitions trategy that emphasize stesting, spiral development, and evolutionary acquisition through the use of two years applied to the control of the contr

The Airborne Laser entered into a program definition and risk reduction contract in November 1996. Development, integration, and testing will continue in FY2004. The program plan is structured to demonstrate technical achievements throughout the preliminary design and risk reduction phase, culminating in a lethality demonstration. This capability based program the easi producing approach towards fielding an ABL system. It leverages the use of two testair craft (Block 2004 and Block 2008) and aground producing allie of ABL sthat systematic ally and incrementally add smore capability astechnology matures. This strategy produces ABL Block 2004, ABL Block 2006, and ABL Block 2008 capabilities during the development phase. ABL Block 2004 and the "Iron Bird" will integrate and test keytechnologies in ABL Block 2006 will evaluate the capabilities of the ABL Block 2004 Test Bedagainst the spectrum of threats and enhance and test its integration into the BM DS by leveraging software and limited hardware changes.

	MDAE	khibitR -3RDT&E	: ProjectC	ostAnalys	is			Dat Fe l	e bruary200)3		
APPROPRIATION/BUDGET	TACTIVITY				R-1NC	MENCLAT	ΓURE					
4.AdvancedComponentD	evelopment	andPrototypes(AC	(D&P)		06038	83CBallist	ticMissile	DefenseBo	oostDefens	seSegment		
I.ProductDevelopmentCost(\$in	Thousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contrac
ABLBlock2006												
ABLBlock2006Contract	SS/Other	BoeingDefense& Space Group/Seattle,WA				9600	1Q	75000	1/4Q		84600	
SubtotalProductDevelopment			0	0		9600		75000			84600	
Remarks	1	l	1	1				1				
II.SupportCostsCost(\$inThous	ands) Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
GovernmentActivities												
TechnicalSupportCosts	Various	Various/Various				150	1/4Q	250	1/4Q		400	
GovernmentandOtherSupport	Various	Various/Various				250	1/4Q	550	1/4Q		800	
SubtotalSupportCosts			0	0		400		800			1200	
Remarks III.TestandEvaluationCost(\$in												
	Contract	Performing	Total	EX.2002	FY2003	EX /200 4	FY2004	EX.200.5	FY2005	a	T . 1	Target
C .C .	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contrac
GovernmentActivities		A FETC/E 1 1										
IntegratedTestForce	MIPR	AFFTC/Edwards AFB						10000	1/4Q		10000	
SubtotalTestandEvaluation			0	0		0		10000			10000	
Remarks												

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APPROPRIATION/BUDGETA 4.AdvancedComponentDe	ACTIVITY			-	R-1NC	OMENCLAT		-		seSegment		
IV.ManagementServicesCost(\$in	•	, , , , , , , , , , , , , , , , , , ,	,2 (:-)			30 5 - 33-			3000 3 = 3 = 3	200 - B		
-	Contract Method	Performing Activity&	Total PYs	FY2003	FY2003 Award	FY2004	FY2004 Award	FY2005	FY2005 Award	Costto	Total	Target Valueof
CostCategories: SubtotalManagementServices	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ProjectTotalCost		Γ	0	0	Γ	10000	Τ	85800	T	 	95800	
Remarks												

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APPROPRIATION/BUDGETACTIVITY												R-1	NO	ME	NCL	ATI	URE	3														
${\bf 4. Advanced Component Development}$	andP	rot	otyp	es(ACI	D&F	P)					060	0388	33C	Bal	listi	сM	issil	eDe	fens	seBo	oost	Def	fens	eSe	gme	ent					
FiscalYear		20	002			20	03			20	004			20	005			20	006			20	07			20	08			200)9	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3 4	4
TestingMilestones																																
AwardtaskorderforcontinuedBlock2004 flttest															Δ																	
AcquisitionMilestones																																
AwardFirstTaskOrder									Δ																							٦
ConductdemosofenhancedBMC4I capability																Δ																
StartDesignofenhancedBMC4I capability									Δ																							

hihitD 11S	ohoduloDotoil			Dat Fo			
				-		gment	
FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
			3Q				
		1Q					
			4Q				
		1Q					
	totypes(ACD	totypes(ACD&P) FY2002 FY2003	R-1NON 060388 FY2002 FY2003 FY2004	R-1NOMENCLATURE	R-1NOMENCLATURE	R-1NOMENCLATURE	R-1NOMENCLATURE

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MDAExhi bitR -2ARDT&EProjectJustification				Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOME 06038830			enseBoos	tDefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0910AirborneLaser(ABL)Block2008	0	0	255535	402168	582462	561417	366217	267352
RDT&EArticlesQty	0	0	0	1	0	0	0	0

A.MissionDescriptionan dBudgetItemJustification ABLBlock2008

ThiseffortcontinuesthedevelopmentoftheAir -Based Boost Defense capability consistent with BMDS needs. It will include maturation to a second test ABLair craft that includes new technologies, and the second test and the secondwithenhanced lethality, and additional operational suitability.

RDT&EArticles:

The commercial "green" 747 - 400 aircraft will be delivered in FY2005.

B.Accomplishments/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
ABLBlock2008			139735	213468
RDT&EArticl es(Quantity)				

FY2004/2005PlannedProgram:

 $We apon System Development \quad -- Continue ABL Block 2008 contract effort for design, fabrication, integration, and testing the second ABL testair craft.$

FY2002Accomplishment:

--Thisprojectisacontinuat ionoftheABLBlock2008effortdescribedunderProject4030.PleaserefertoFY2002ABLBlock2008accomplishmentlistedunderProject4030.

FY2003PlannedAccomplishments:

--ThisprojectisacontinuationoftheABLBlock2008effortdescribedunde r Project 4030. Pleaser eferto FY 2003 ABL Block 2008 planned accomplishments listed under Project 4030.

FY2004PlannedAccomplishments:

- -- Complete ABL Block 2008 requirements analysis and allocation and conduct ABL Block 2008 System Requirements Review of the conduct and theew(SRR).
- --CompleteABLBlock2008preliminarydesignandconductABLBlock2008PreliminaryDesignReview(PDR).

FY2005PlannedAccomplishments:

- --ContinueengineeringdesignandconductABLBlock2008CriticalDesignReview(CDR).
- --Beginmodificat ionofcommercial "green" 747 -400 aircraft.
- --BeginfabricationofABL components.

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MDAExhi bitR -2ARDT&EProjectJustifi	ication		Date February2003	
APPROPRIATION/BUDGETACTIVITY	R-1NOMEN	CI ATURE		
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)			seBoostDefenseSegment	
4. Advanced Component Development and Totolypes (ACDGT)	•			EX.2005
	FY2002	FY2003	FY2004	FY2005
InfrastructureImprovement			14000	10000
RDT&EArticles(Quantity)				
FY2004/2005PlannedProgram: Continueprocurementoflongle aditems(optics,etc)andsustainsABL -specificindustrialba FY2004PlannedAccomplishments:Continueacquisitionoflongleadoptics FY2005PlannedAccomplishments:Takedeliveryoflongleadoptics	ase.			
	FY2002	FY2003	FY2004	FY2005
TechnologyInsertion			10000	10000
RDT&EArticles(Quantity)				
FY2004/2005PlannedProgram: DeveloppromisingtechnologiesforincorporationinABLBlock2008orfutureABLblocks. FY2004PlannedAccomplishments:Downselecttechnologiesforincorpo rationintotheABLBlock2008technicalbaseline. FY2005PlannedAccomplishments:DownselecttechnologiesforincorporationintotheABLBlock2008technicalbaseline.				
	FY2002	FY2003	FY2004	FY2005
IronBird			50000	50000
RDT&EArticles(Quan tity)				
FY2004/2005PlannedProgram: Continuedesignanddevelopmentofsystem -levelgroundtestfacility,alsoreferredtoasthe"Iron FY2004PlannedAccomplishments:Conducttransitionfromsystemintegrationlaboratory(SIL)tothe"Ir onBird".	nBird."			

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MDAExhi bitR -2ARDT&EProjectJustif	fication		Date February2003	
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENO		nseBoostDefenseSegment	
FY2005PlannedAccomplishments:ConductABLBlock2008riskreductionactivitiesin"IronBird".	0003003CD	amsuciviissiieDete	nseboostDetensesegment	
	FY2002	FY2003	FY2004	FY2005
Commercial747 -400Acquisition			40000	100000
RDT&EArticles(Quantity)				1
Continuepaymentsforcommercial "green" 747 - 400aircraft. FY2004PlannedAccomplishments:Continuepaymentsforcommercial "green" 747 - 400aircraft. FY2005PlannedAccomplishments:Takedeliverycommercial "green" 747 - 400aircraft. RDT&EA rticles: Thecommercial "green" 747 - 400aircraft will be delivered in FY2005.				
	FY2002	FY2003	FY2004	FY2005
GovernmentActivities			1800	18700
RDT&EArticles(Quantity)				
FY2004/2005PlannedProgram: Continueadvisoryandassistanceservices andgovernmentoperationsandsupportforlabor,tra	uining,travel,andequipment			

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Date MDAExhi bitR -2ARDT&EProjectJustification February2003 APPROPRIATION/BUDGETACTIVITY R-1NOMENCLATURE 4. Advanced Component Development and Prototypes (ACD&P)0603883 CB all istic Missile Defense Boost Defense SegmentC.OtherProgramFundingSummary To Total FY2002 FY2003 FY2004 FY2005 FY2006 FY2007 FY2008 FY2009 Complete Cost PE0603869CMeadsConcepts -Dem/Val PE0603175CBallisticMissileDefense Technology PE0603879CAdvancedConcepts, **Evaluations and Systems** PE0603880CBallisticM issileDefense SystemSegment PE0603881CBallisticMissileDefense TerminalDefenseSegment PE0603882CBallisticMissileDefense MidcourseDefenseSegment PE0603884CBallisticMissileDefense Sensors PE0603886CBallisticMissileDefense SystemInterceptors PE0603890CBallisticMissileDefense SystemEngineeringandIntegration PE0603889CBallisticMissileDefense Products PE0604861CTheate rHigh -AltitudeArea DefenseSystem -TMD -EMD PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD PE0604867CNavyAreaTheaterMissile Defense -EMD PE0605 502CSmallBusinessInnovative Research - MDA PE0901585CPentagonReservation PE0901598CManagementHeadquarters -MDA PE060 3888CBallisticMissileDefenseTest andTargets

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MDAExhi bitR -2ARDT&EProjectJustification		Date February2003
APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	0603883CBallisticMissileDefen	seBoostDefenseSegment
D.AcquisitionStrategy		<u> </u>
The Airborne Laser will follow the Missile Defense Agency's capability -based acquisition strategy that year capability blocks.	atemphasizestesting,spiralde velopmer	nt,andevolutionaryacquisitionthroughtheuseoftwo -
The Airborne Laserentered into a program definition and risk reduction contract in November 1996. Develop to demonstrate technical achievements throughout the preliminary design and risk reduction phase, culmina approach towards fielding an A BL system. It lever a gest he use of two testair craft (Block 2004 and Block 200 producing a line of ABL sthat systematically and incrementally adds more capability as technolog yr capabilities during the development phase. ABL Block 2004 and the "Iron Bird" will integrate and test key tech ABL Block 2008. ABL Block 2006 will evaluate the capabilities of the ABL Block 2004 Test Bedagainst the software and limited hardware changes.	tinginalethalitydemonstration.Thiscapabil 08)andaground -basedtestfacilit natures.ThisstrategyproducesABLBlock2 nnologies,allowingimprovedcapabilitiesar	lity -basedprogramtakesaspiraldevelopment ty(IronBird).Theapproachtakesadvantageof 004,ABLBlock2006,andABLBlock2008 ndintegrationof maturingtechnologiesin

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	MDAE	khibitR -3RDT&E	ProjectC	ostAnalys	sis			Dat Fe	te <mark>bruary20(</mark>)3		
APPROPRIATION/BUDGET 4.AdvancedComponentDe		andPrototypes(AC	(D&P)			MENCLA' 83CBallis		DefenseB	oostDefen	seSegment		
I. Product Development Cost (\$in')	Thousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
ABLBlock2008												1
ABLBlock2008	SS/CPAF	BoeingDefense& Space Group/Seattle,WA				139735	1/4Q	213468	1/4Q	CONT.	353203	CONT.
InfrastructureImprovement												
Contract	SS/Other	Various/Various				14000	1/4Q	10000	1/4Q	CONT.	24000	CONT.
TechnologyInsertion												
Contract	SS/Variou s	Various/Various				10000	1/4Q	10000	1/4Q	CONT.	20000	CONT.
IronBird												
Contract	SS/CPAF	BoeingDefense& Space Group/Seattle,WA				50000	1/4Q	50000	1/4Q	CONT.	100000	CONT.
Commercial747 -400 Acquisition												
Contract SubtotalProductDevelopment	SS/FFP	BoeingCommercial A/CGroup/Seattle, WA	0	0		40000 253735	1/4Q	100000 383468	1/4Q		140000 637203	
Remarks			U	U		233133		363406			037203	
	housands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
GovernmentActivities			_								_	i
TechnicalSupportCosts	Various	Various/Various				500	1/4Q	7500	1/4Q	CONT.	8000	CONT
GovernmentandOtherSupport	Various	Various/Various				1300	1/4Q	11200	1/4Q	CONT.	12500	CONT
SubtotalSupportCosts			0	0		1800		18700			20500	
Remarks	•					,						

Project:0910 31 of 61 UNCLASSIFIED

				CITCL									
	14D 4 E	I I I I ADDES		~	Date								
		chibitR -3RDT&l	EProjectC	CostAnalys				Fe	bruary200	03			
APPROPRIATION/BUDGET.						MENCLA							
4.AdvancedComponentDe	velopmenta	andPrototypes(AC	CD&P)		06038	83CBallis	ticMissile	DefenseB	oostDefen	seSegment			
III.TestandEvaluationCost(\$inT	Thousands)												
,	Contract	Performing	Total		FY2003		FY2004		FY2005			Target	
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof	
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract	
SubtotalTestandEvaluation			1										
Remarks					.1	I	,l	,L	,L			,	
1													
IV.ManagementServicesCost(\$i	nThousands)												
1 V. Managementoti vices Cost(wi	Contract	Performing	Total	T	FY2003		FY2004		FY2005	 		Target	
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof	
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract	
SubtotalManagementServices			+	+	+					1			
Remarks											<u> </u>		
ProjectTotalCost	T 1	Γ	0	0		255535	1	402168	1	Т	657703	1	
Remarks		<u>L</u>	U	U		233333	<u> </u>	402100			037703		
Remarks													

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	MDA	Exhil	bitR	-4Sc	chedu	ılePı	rofil	e									Da Fe	ite bru	aryź	200.	3							
APPROPRIATION/BUDGETACTIVI 4.AdvancedComponentDevelopm		rotot	ypes	(ACI	D&P))							LAT allisti		ssileI	e f						Segn	nen	nt				
FiscalYear		200	2		200)3		2	004			2005	;		2006	5		20	07			20	008			20	009	
	1	2	3 4	1	2	3 4	4 1	2	3	4	1	2 3	3 4	1	2 3	3 4	1	2	3	4	1	2	3	4	1	2	3	4
AcquisitionMilestones	1	2	3 4	1	2	3 4	4 1	2	3	4	1	2 3	3 4	1	2 3	3 4	1	2	3	4	1	2	3	4	1	2	3	4
AcquisitionMilestones BeginAircraftModification	1	2	3 4	1	2	3 4	4 1	2	3	4	1	2 3	3 4	1	2 3	3 4	1	2	3	4	1	2	3	4	1	2	3	4
	1	2	3 4	1	2	3 4	4 1	2	3	4	1	2 3	3 4 Δ	1	2 3	3 4	1	2	3	4	1	2	3	4	1	2	3	4

MD	AExhibitR -4AS	cheduleDetai	l		Dat Fe l	te bruary2003							
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentan	dPrototypes(ACL	0&P)	R-1NOMENCLATURE 0603883CBallisticMissileDefenseBoostDefenseSegment										
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009					
AcquisitionMilestones													
BeginAircraftModification				3Q									
CriticalDesignReview				4Q									
PreliminaryDesignReview			4Q										

MDAExhibitR -2ARDT&EProjectJustification	1			Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentan dPrototypes(ACD&P)	R-1NOME 06038830			enseBoos	tDefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
4020Sea -BasedBoost	30070	0	0	0	0	0	0	0
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

InFY2003,theMissileDefenseAg ency(MDA)combinesfundsunderProjects4020(Sea -BasedBoost)and4040(Space -BasedBoost)inProject4010todeveloptheBlock2008KineticEnergy (KE)boostphasecapability.SeeProject4010foracomprehensivedescriptionoftheFY2003plannedprog ram.InFY2004andbeyond,fundingfortheseprojectswilltransitionintotheBMDS InterceptorProgramElement(PE) -0603886C,Projects0913and0013.BelowisadescriptionofFY2002accomplishmentsforProjects4020and4040.

The MDA is developing a Ballistic Missile Defense System (BMDS) that protects the U.S., U.S. Allies, friends, deployed forces, and are as of vital interest by providing layered defense sto intercept ballistic missiles in all phases of flight -boost, midcourse, and terminal. MD A plans an evolutionary, spiral acquisition approach to achieve greater capability over time.

CreatingaboostphaselayerisfundamentaltotheMDAgoalofarobust,integratedBMDS.ByBlock2008,theMDAplanstodevelopanddemonstrate,throughfligh t-testingintheBMDSTestBed, amobile,ground -basedboostphasecapabilitythatuseshit -to-killtechnology.Basedontheinterceptor'sdynamicperformance,itsinitialcapabilitymaybeextendedintotheascentandmidcourse phases.MDAwilltestthe Block2008interceptortodemonstrateitspotentialapplication.ThiscapabilitywillevolveinsubsequentBlockstointegratewithotherlaunchplatforms(e.g.sea -based) andfillcapabilityshortfallsintheoverallBMDSarchitecture.Throughoutitsdev elopment,theBlock2008capabilitywillrelyheavilyonexistinghardwareandproventechnology.

B.Accomplishments/PlannedProgram

Direcomplishments/1 tunneut rogram				
	FY2002	FY2003	FY2004	FY2005
Block2008	30070			
RDT&EArticles(Quantity)				

FY2002Accomplishments:

- $o Comple \ ted concept definition and assessment work to define high payoff intercept or concepts and basing modes.$
- oConductedmultipleriskreductionexperimentsdemonstratingthecriticalboostphasefunctionality.
- oTargetsofopportunitytestingdemonstratedthe feasibilityofcriticalboostphasecomponents,e.g.,trackingcapabilitiesandsensorintegration,andprovidedvaluablephenomenologicaldata. oInitiatedcooperativeconceptdefinitionandassessmenteffortswiththeMDANationalTeamtoprovideafou ndationforfuturecomponentdevelopment.

C.OtherProgramFundingSummary

									То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		

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MDAExhi		Date February2003								
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentan	dProtot	ypes(ACD&	νP)		MENCLATU B 3CBallistic	RE MissileDefe	nseBoostDe	fenseSegme	nt	
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMis sileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		

		xhibitR -3RDT&E		ostriiaiys		MENCLA'	TIDE	rc	bruary200	<i>,</i>		
APPROPRIATION/BUDGET 4.AdvancedComponentDe		andDratatymag(AC	D & D)					DefenseB	oogtDofon	coCo amo	nt	
		andr rototypes(AC	D&F)		00030	oscbains	uciviissiie	Defensed	oostDefell	seSe gme	Ш	
I.ProductDevelopmentCost(\$in	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY200 5	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contrac
Block2008	- Clype	Location		Cost	Dute	Cost	Dute	Cost	Dute	Complete	Cost	Сопиче
ExperimentComponentDevpt.	CPAF	LockheedMartin/ Moorestown,NJ	6100								6100	
ExperimentComponentDesign	CPAF	Raytheon/Tucson, AZ	10804								10804	
ComponentRiskReduction	Various	Various	1900								1900	
ConceptDevelopmentSupport	Various	Various	5515								5515	
SubtotalProductDevelopment			24319	0		0		0			24319	
II.SupportCostsCost(\$inThous		Df	T-4-1	T .	FY2003	I	FY2004	T	FY2005	T		Т
	Contract Method	Performing Activity&	Total PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Target Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
CostCategories.	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
_												
SubtotalSupportCosts												
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in')												
SubtotalSupportCosts Remarks	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in	Contract Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in' CostCategories:	Contract			FY2003 Cost		FY2004 Cost		FY2005 Cost		Costto Complete	Total Cost	Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in' CostCategories:	Contract Method	Activity& Location	PYs		Award		Award		Award			Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in CostCategories: Block2008	Contract Method &Type	Activity& Location SMDC/Huntsville,	PYs Cost		Award		Award		Award		Cost	Target Valueof Contract
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in' CostCategories:	Contract Method	Activity& Location	PYs		Award		Award		Award			Valueof

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APPROPRIATION/BUDGET		hibitR -3RDT&	.,			MENCLA	ΓURE		bruary200			
4.AdvancedComponentDo	evelopmenta	ndPrototypes(A	CD&P)		06038	83CBallis	ticMissile	DefenseB	oostDefen	seSe gme	nt	
IV.ManagementServicesCost(\$	inThousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategor ies:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
Block2008												
SETA/FFRDC	Various	Various	4251								4251	
SubtotalManagementServices			4251	0		0		0			4251	
Remarks												
ProjectTotalCost			30070	0		0		0			30070	
Remarks				l.		l.		II.	l	l	lI	

	MDA	Exh	nibitR	-4	Sch	edule	ePro	file												Date Fel	e orua	ry2	003	}							
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopment	andP	roto	otype	s(A	CD8	&P)					R-1 06 0							eDe	fens	eВo	ostI	Defe	ense	Seg	gme	ent					
FiscalYear	1	20	02	4	4 6	2003	I 4	1	20	04	1 4	1		05	l 4	1	20	06	4	1	200	7	4	1 1	200	08	4	4	200		4
Program Milestones a. Issue Broad Agency Announcements (BAA)		<u> </u>	3	4 <u>I</u>	1 2	2 3	4	1	2	3	4	<u> </u>	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
b.ConceptAssessmentComplete			1	<u> </u>																											

MD	AExhibitR -4AS	cheduleDetail			Da Fe	te bruary2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentand	Prototypes(ACI	0&P)		MENCLATU RI 3 CBallisticM i	E issileDefenseB	oostDefenseSe	egment	
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY20 08	FY2009
ProgramMilestones								
a.IssueBroadAgencyAnnouncements(BAA)	2Q							
b.ConceptAssessmentComplete	4Q							

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MDAExhibitR -2ARDT&EProjectJustification				Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOME 0603883 0			enseBoost	tDefenseS	egment		
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
4040Space -BasedBoost	23779	0	0	0	0	0	0	0
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

In FY 2003 MD A combines funds under Projects 4020 and 4040 to develop the Block 2008 boost phase capability. See Project 4020 for the combined KEB description for FY 2002. For FY 2003 planned program detail, see Project 4010.

oostprojectaccomplishmentsand

B.Accomplishments/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
Block2008	23779			
RDT&EArticles(Quantity)				

In FY 2003 MDA comb in esfunds under Projects 4020 and 4040 to develop the Block 2008 boost phase capability. See Project 4020 for the combined KEBoost project accomplishments and description in FY 2002. For FY 2003 planned program detail, see Project 4010.

C.OtherProgr amFundingSummary

									То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalD efenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		

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MDAEx	hibitR -2AF	RDT&EPro	jectJustifica	ition			Date February	2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmenta	andPrototyp	es(ACD&P))		MENCLATU B 3CBallistic	RE MissileDefe	nseBoostDe	fenseSegme:	nt	
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHi gh-AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502C SmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		

Date ectCostAnalysis February2003	stAnalysi	ProjectCo	chibitR -3RDT&E	MDAEx	
R-1NOMENCLATURE				A CTIVITY	APPROPRIATION/BUDGET
0603883CBallisticMissileDefenseBoostDefenseSegment		D&P)	andPrototypes(AC	evelopmenta	4.AdvancedComponentDe
				Thousands)	I.Produc tDevelopmentCost(\$in
		Total	Performing	Contract	
	FY2003	PYs	Activity&	Method	
st Cost Date Cost Date Cost Date Complete Cost Cor	Cost	Cost	Location	&Type	CostCategories:
					Block2008
5500		5500	Boeing/CanogaPk., CA	SS/CPFF	ExperimentComponentDevpt.
842 842		842	Raytheon/Tucson, AZ	SS/CPAF	ExperimentComponentDesign
785		785	Various	Various	ComponentRiskReduction
3652 13652		13652	Various	Various	ConceptDevelopmentSupport
0779 0 0 0 20779	0	20779			SubtotalProductDevelopment
	EMAGOGA				
tal FY2003 FY2004 FY2005 Ta		Total	Performing	Contract	II.SupportCostsCost(\$inThousa
		PYs	Activity&	Method	
st Cost Date Cost Date Cost Date Complete Cost Cor	Cost	Cost	Location	&Type	CostCategories:
					SubtotalSupportCosts
				Thousands)	$\label{lem:restandEvaluationCost} Remarks $$ III. Testand Evaluation Cost (\$in 7) $$ The standing of the property of the pro$
		Total	Performing	Contract	
		PYs	Activity&	Method	
st Cost Date Cost Date Cost Date Complete Cost Cor	Cost	Cost	Location	&Type	CostCategories:
					SubtotalTestandEvalua tion
					Remarks
					Remarks tion

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APPROPRIATION/BUDGET	TA CTIVITY				R-1NC	MENCLA'	TURE					
4.AdvancedComponentD	evelopmenta	ndPrototypes(A	CD&P)		06038	83CBallis	ticMissile	DefenseB	oostDefen	seSegment		
IV.ManagementServicesCost(\$	inThousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contrac
Block2008												
SETA/FFRDC	Various	Various	3000								3000	
SubtotalManagementServices			3000	0		0		0			3000	
Remarks			•	•		•	•	•	•	•		
ProjectTotalCost			23779	0		0		0			23779	
Remarks	<u> </u>			1				1	·	1		l

I	MDA	Exl	nibi	tR	-4S	che	dule	Pro	file											Dat Fel	-	ary	200	3								
APPROPRIATION/BUDGETACTIVITY											R-1	NO	MEI	NCL	AΤ	URE																
4.AdvancedComponentDevelopment	andP	rote	otyp	es(AC	D&	P)				060	0388	33C	Bal	listi	c N	Iissi	leD	efen	seB	oos	stD	efer	1seS	Segn	nen	t					
FiscalYear	1	_	002	4	1	20	003	4	1	004	4	1		05	4	1	20		4	1	20	07	4	1	20	300	4	1	_	009	4	7
ProgramMilestones																																1
a.lssueBroadAgencyAnnouncements (BAA)		A																														
b.ConceptAssessmentComplete																																

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		UNO	CLASSIFII	$\mathbf{E}\mathbf{D}$				
MD	AExhibitR -4AS	che duleDetai	1		Da Fe	te bruary2003		
APPROPRIATION/BUDGETACTIVITY	ID 4.4 (ACE	N (D)		MENCLATURE	3	•	,	
4.AdvancedComponentDevelopmentand			<u>#</u> .		issileDefenseB			EV2000
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
ProgramMilestones								
a.IssueBroadAgencyAnnouncements(BAA)	2Q							
b.ConceptAssessmentComplete	4Q							

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MDAExhibitR -2ARDT&EProjectJustification	1			Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDeve lopmentandPrototypes(ACD&P)	R-1NOME 06038830			enseBoos	tDefenseS	egment		
COST(\$inThousan ds)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
4010KineticEnergyBoost	0	91506	0	0	0	0	0	0
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

InFY2003,TheMissileDefenseAgency(MDA)comb inesfundsunderProjects4020(Sea -BasedBoost)and4040(Space (KE)boostphasecapability.InFY2004andbeyond,theprojectwilltransitiontotheBMDSInterceptorProgramElement inPE0603886C.Projects0913and0013.

TheMDAisdevelopingaBallisticMissileDefenseSystem(BMDS)thatprotectstheU.S.,U.S.Allies,friends,deployedforces,andareasofv italinterestbyprovidinglayereddefensestointercept ballisticmissilesinallphasesofflight -boost,midcourse,andterminal.MDAplansanevolutionary,spiralacquisitionapproachtoachievegreatercapabilityovertime.

Creatingaboostphase layerisfundamentaltotheMDAgoalofarobust,integratedBMDS.ByBlock2008,theMDAplanstodevelopanddemonstrate,throughflight -testingintheBMDSTest Bed,amobile,ground -basedboostphasecapabilitythatuseshit -to-killtechnology.Based ontheinterceptor'sdynamicperformance,itsinitialcapabilitymaybeextendedintotheascentand midcoursephases.MDAwilltesttheBlock2008interceptortodemonstrateitspotentialapplication.ThiscapabilitywillevolveinsubsequentBlocksto integratewithotherlaunchplatforms(e.g. sea-based)andfillcapabilityshortfallsintheoverallBMDSarchitecture.Throughoutitsdevelopment,theBlock2008capabilitywillrelyheavilyonexistinghardwareandproventechnology.

B.Accomplishment s/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
Block2008		91506		
RDT&EArticles(Quantity)				

FY 2002 accomplishments are described in Projects 4020 and 4040. For completeness, these descriptions are repeated below. The project of th

FY2002Accomplishments:

- o Completedconceptdefinitionandassessmentworktodefinehighpayoffinterceptorconceptsandbasingmodes.
- oConductedmultipleriskreductionexperimentsdemonstratingthecriticalboostphasefunctionality.
- oTargetsofopportunitytestingdemonstrat edthefeasibilityofcriticalboostphasecomponents,e.g.,trackingcapabilitiesandsensorintegration,andprovidedvaluablephenomenologicaldata. oInitiatedcooperativeconceptdefinitionandassessmenteffortswiththeMDANationalTeamtoprovide afoundationforfuturecomponentdevelopment.

FY2003PlannedProgram:

oAwardmultipleconceptdesigncontractsforadown -selecttoonecapabilitydeveloperinFY2004fordevelopmentoftheBlock2008capability.

oCommenceNear -FieldInfraRedEx periment(NFIRE)developmenttocollectnear -fieldplumeandhardbodydatafromseveraltargetsofopportunityandadedicatedtarget.MDAwillusethisdata todevelophomingalgorithmsforboostphaseendgame,modeldevelopment,andverification.TheNF IREsatellitepayloadwillcarryasuiteofsensorsthatwillcollectdataacrossabroad electromagneticspectrumfromlong -waveinfraredtovisible.Inaddition,criticaldatawillbecollectedforearlylaunchdetection,sensortracking,andcharacteri zingtheearthbackground.

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MDAExhibitR -2ARDT&EProjectJustification		Date February2003
APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	
4. AdvancedComponentDeve_lonmentandPrototypes(ACD&P)	0603883CBallisticMissileDefen	seRoostDefenseSegment

oIntegrate and test the Generation 2 kill vehicle (KV) in preparation for a FY2004 hover test and integration into the near variants of existing MDA develope dKV components. They will be the first KV swith the performance to reliably achieve boost phase intercept.

oContinueKEBoostTestBeddevelopmentthroughoutFY2003.

oConductreal -timefirecontrol/commandandcontrol,battlemanagement,andcommunic opportunity. ations(C2BMC)exercisesandsimulatedengagementsusingspacelaunchandballisticmissiletargetsof

oUsingground -basedandair -basedsensors,collectboost/ascentphasedataontargetsofopportunitytosupportBlock2008capabilitydeve lopment.

C.OtherProgramFundingSummary

									То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603889CBallistic MissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C ManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		

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MDAEx	khibitR -2AR	DT&EPro	jectJustifica	tion			Date February	2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDeve lopmen	ntandPrototy	pes(ACD&	P)		MENCLATU B 3CBallistic		nseBoostDe	fenseSegme	nt	
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		

D.AcquisitionStrategy

TheKEBoostprojectwillfollowtheMDA'scapability	-basedacquisitionstrategythaten	nphasizestesting, spiraldevelopment, and evolutionary acquis	sitionthroughtheuseoftwo -	yearcapability
blocks. Theoverall programobjective is to addalimited Kl	EBoostlayertotheBMDSBlock20	008capability, fielding more robust capabilities in subsequently	Blocks.InFY2002,thenear	-field
experiment contract was awarded as a result of a Broad Area and a result	Announcementcompetitio	n.InFY2003,multipleBlock2008conceptdesigncontractsw	rillbeawardedwithadownselecttoon	e
capability development contractor in FY 2004. (See PE0603)	3886C(BMDSInterceptors),Proj	ects0913and0013,fortheacquisitionstrategyinFY2004andb	eyond.)	

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	3.50 / 5	LALLE ADDERSE	.					Dat		0.0		
		khibitR -3RDT&E	ProjectC	ostAnalys				Fe	bruary20	03		
APPROPRIATION/BUDGE						MENCLA'						
4.AdvancedComponentD	evelopmenta	${f and Prototypes}({f AC})$	D&P)		06038	83CBallis	ticMissile	DefenseB ₀	oost De	fenseSegmer	nt	
I.ProductDevelopmentCost(\$in	Thousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
Block2008												
GroundBased	C/Various	TBD		30000	3Q					CONT.	30000	CONT
		SBIRSSPO/Los										
SensorIntegration	MIPR	AngelesAFB,CA		2065	1/2Q					CONT.	2065	CONT
SubtotalProductDevelopment			0	32065		0		0			32065	
Remarks												
TT G	• \											
II.SupportCostsCost(\$inThous	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costt o	Total	Valueof
CastCatagorias		Location	Cost	Cost	Awaru Date	Cost	Date	Cost	Date	Costi o	Cost	
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
Block2008		***		5006	1/20					CONT	700 5	GONT
SETA	Various	Various		5086	1/3Q					CONT.	5086	CONT
CapabilityEngineering	MIPR	NSWC/DD		1250	1/20					CONT.	1250	CONT
CapabilityEngineering	MIIPK	/Dahlgren,VA			1/2Q			0		CON1.	6336	CONT
			Δ.									
SubtotalSupportCosts			0	6336		0		0			0330	
			0	6336		0		0			0330	
SubtotalSupportCosts			0	6336		0		0			0330	
SubtotalSupportCosts Remarks			0	6336		0		0			0330	
SubtotalSupportCosts		Performing		6336	FY2003	0	FY2004		FY2005		0330	Target
SubtotalSupportCosts Remarks	Thousands) Contract	Performing Activity&	Total		FY2003 Award		FY2004 Award		FY2005 Award	Costto	Total	Target Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in	Thousands) Contract Method	Performing Activity& Location		FY2003 Cost		FY2004 Cost		FY2005 Cost				Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$ir	Thousands) Contract	Activity&	Total PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto Complete	Total	Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$in	Thousands) Contract Method	Activity& Location	Total PYs	FY2003	Award	FY2004	Award	FY2005	Award		Total	Valueof
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$ir	Thousands) Contract Method	Activity&	Total PYs	FY2003	Award	FY2004	Award	FY2005	Award		Total	Valueof Contract
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$ir CostCategories: Block2008	Contract Method &Type	Activity& Location SMDC/Huntsville, AL	Total PYs	FY2003 Cost	Award Date	FY2004	Award	FY2005	Award	Complete	Total Cost	Valueof Contract
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$ir CostCategories: Block2008	Contract Method &Type	Activity& Location SMDC/Huntsville,	Total PYs	FY2003 Cost	Award Date	FY2004	Award	FY2005	Award	Complete	Total Cost	Valueof Contract
SubtotalSupportCosts Remarks III.TestandEvaluationCost(\$ir CostCategories: Block2008 TestPlanning&Execution	Contract Method &Type Other	Activity& Location SMDC/Huntsville, AL NSWC/PHD/Port	Total PYs	FY2003 Cost	Award Date	FY2004	Award	FY2005	Award	Complete CONT.	Total Cost	•

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	MDAE	xhibitR -3RDT&E	ProjectC	ostAnalys	is			Da Fe	te bruary20	03		
APPROPRIATION/BUDGET			rojecte	osti iliaiy s		MENCLA'	TURE	110	or uur y 20			
4.AdvancedComponentDe		andPrototypes(AC	D&P)					DefenseB	oost De	fenseSegmer	nt	
TestBedDevelopment&Test	MIPR	AFRL/Kirtland AFB,NM		2100	1/2Q					CONT.	2100	CONT
BoostKillVehicle	Other	RaytheonandNavy EA/Tucson,AZ		12100	1/2Q					CONT.	12100	CON
BoostKillVehicle	Other	AFRL/Kirtland AFB,NM		2500	1/2Q					CONT.	2500	CONT
NearFieldInfraredExperiment	Other	SMCDet 12/KirtlandAFB, NM		7000	1/2Q					CONT.	7000	CON
NearFieldInfraredExperiment		Spectrum Astro/Gilbert,AZ		15500	1/2Q					CONT.	15500	CONT
NearFieldInfraredExperiment	Other	AFRL/Kirtland AFB,NM		6000	1/2Q					CONT.	6000	CONT
NearFieldInfraredExperiment	Other	RaytheonandNavy EA/Tucson,AZ		600	1/2Q					CONT.	600	CON
SubtotalTestandEvaluation			0	52605		0		0			52605	
IV.ManagementServicesCost(\$i	inThousands) Contract	Performing	Total	Γ	FY2003	T	FY2004	1	FY2005	1		Tomost
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Target Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
Block2008												
FFRDC	MIPR	MIT/LL/Hanscom AFB,MA		100	1/2Q					CONT.	100	CONT
FFRDC	Various	JHU/APL/Laurel, MD		400	1/2Q					CONT.	400	CON
SubtotalManagementServices			0	500		0		0			500	
Remarks												
ProjectTotalCost			0	91506		0		0			91506	
i roject rotare obt												

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	MDA	Exh	ibit	R -	4Sc	hed	lule	Pro	file												Dat Fe		ary:	200	3							
APPROPRIATION/BUDGETACTIVITY	?											R-1	NO	MEI	NCL	ATU	JRE	,														
${\bf 4. Advanced Component Development}$	tandP	roto	otyp	es(A	ACI)&I	P)					060)388	3C	Ball	isti	сMi	ssil	eDe	fens	seB	oost	Def	fens	eSe	gm	ent					
FiscalYear		20	02			20	03			20	004			20	05			20	06			20	07			20	800			20	09	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block2008																																
a.Block08CapabilityRequestFor Proposal(RFP)																																
b.Block08MultipleContractorAward																																
c.Block08CapabilityRequestFor Proposal(RFP)						Δ																										
d.Block08MultipleContractorAward							Δ																									
e.Gen2KVIntegrated,Tested,& DeliveredtoNHTF								Δ																								

MDA	ExhibitR -4AS	cheduleDetail			Da Fe	te bruary2003		
APPROPRIATION/BUDGETACTIVITY			R-1 NO	MENCLATURE	E			
${\bf 4. Advanced Component Development and P}$	rototypes(ACE	0&P)	060388	3CBallisticMi	ssileDefenseB	oostDefenseSo	egment	
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2008								
a.IssueBroadAgencyAnnouncements(Proj.4020)	2Q							
b.Con ceptAssessmentComplete(Proj.4020)	4Q							
c.Block08CapabilityRequestForProposal(RFP)		2Q						
d.Block08MultipleContractorAward		3Q						
e.Gen2KVIntegrated,Tested,&DeliveredtoNHTF		4Q						

MDAExhibitR -2ARDT&EProjectJustification				Date Febru	ary2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOME 06038830			enseBoost	tDefenseS	egment		
COST(\$inThousands)	FY2 002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
4043SpaceBasedLaser	46248	22856	0	0	0	0	0	0
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

The Missile Defense Agency (MDA) will continue to pursue directed energy (DE) technologies as an important component of the BMDS ystem. Directed energy applications remain among the highest priorities actively pursued as a part of MDA's technology effort.

InFY2002,theSpace -BasedLaserprogramwasreevalu atedinitsentirety.ResultsofthisreviewincludedageneralprogramrestructureandthecessationofpriorSBL -specificprogramgoals.In FY2003 and beyond, the legacySBL program will be evolved into a Laser Technology program and will be managed spart of the Advanced Systems (AS) program. This directorate will focus efforts and build on existing knowledge to further refine the DE concept and provide options for future system production. Emergent technologies resulting from this investment will provide MDA with the ability to pursue DE systems, possibly including a Space -Based DE program. This strategy is consistent with the MDA spiral development and evolution ary acquisition approach to building effective and capable missile defenses.

LaserTe chnology:TheLaserTechnologyprogramfocusesondevelopinglasersandrelatedcomponenttechnologyforlowpowerapplicationsincludingtracking,weaponguidance,andimaging, whileinvestinginhigh -energylasertechnologiesthatcouldleadtoafuture Space -BasedLasereffort.Theemphasisonlow -powersystemsisdrivenbytheirconsiderablepotentialtoimproveand supportMDA'shit -to-killweapons.

B.Accomplishments/PlannedProgram

Direcomprishments/1 tumetar rogram				
	FY2002	FY2003	FY2004	FY2005
SpaceBasedLaser	46248	22856		
RDT&EArticles(Quantity)				

FY2002Accomplishments:

SuccessfullycompletedsystemlevelSBLIntegratedFlightExperiment(IFX)designthatsatisfiedperformancerequirementstodestroyaboostingmissilefromspaceusingahigh -energylaseras specifiedintheStatementofObjectives.

AssembledandcharacterizedthefirstdiagnosticformakingMHzfrequencysubaperturemeasurementsonahighenergylaserbeam(MITS ---MHzIntensityandTiltSensor).

SuccessfullymadethefirstMHzfrequencysubapertur emeasurementsonahighenergylaserbeam(AlphatestHL913)anddemonstratedthatthehightemporalfrequencysubapertureslopecontent of the beamwassmall. In addition, HL913 was very successful by being one of the longest high energy tests performed with Alpha at 8 seconds.

Completed CDR on the Short Stack laser risk reduction Test Bedtovalidate the performance models used in the IFX laser design.

CompletedtestingofthreeAdvancedNozzleconfigurationsforimprovedHF/HFOT/DFlaserperformance (SBLdevelopedhardware,testingco -fundedbyJTO).

EfficientlyclosedouttheTeamSBLIFXcontractfordevelopmentandspaceflightoftheSBLIntegratedFlightExperiment.AllocatedremainingFY2002fundstolasersystemtechnologyefforts.

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MDAExhibitR -2ARDT&EProjectJustification	I.	Date February2003
APPROPRIATION/BUDGETACTIVITY	R-1NOMENCLATURE	
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	0603883CBallisticMissileDefen	seBoostDefenseSegment

FY2003 PlannedProgram:

MajorProjects:TheAgencyplanstoselectconceptsandawardcontractsfortwofocusedtechnologyprojectsinFY2003,andawardathirdsimilarcontractinFY2004. These projects will be drawnfrom proposals solicited from the laser weapons development that also developshigh and advanced research on chemical lasers tore and advanced research on chemical lasers tore and a second of the contract of the con

TechnologyBaseactivity:Thisfundingsupportsawi derangeofeffortsdeemedworthyofinvestigationforpotentialapplicationtotheBMDSystem,yetinsufficientlymaturetowarrantmajor contractaward.TechnologyBaseprojectswillincluderesearchintohighlyadvancedsolid -stateandchemicallaserc onceptsrequiringlaboratoryvalidation,newconceptsforkineticweapon guidanceviaremotelasers,andnewdetectorconceptstoenablefuturelaserradarstodiscriminatemovingtargetsusingmotionandshapefeatures.

Lever aging of successful projects initiated under the High Energy Laser (HEL) Joint Technology Office (JTO): Promising JTO projects with specific applicability to ball is ticm is sile defense will be selected for intensified funding under MDA auspices, into rapidly exploit breakthrough sand successes achieved under the JTO program and apply them to missile defense applications.

C.OtherProgramFundingSummary

									То	Total
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	Complete	Cost
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869CMeads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMis sileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		

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MDAEx	hibitR -2AR	RDT&EProj	jectJustifica	ition			Date February	2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-1NOMENCLATURE 0603883CBallisticMissileDefenseBoostDefenseSegment					
PE0603884CBallisticMissil eDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandInte gration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		

D.AcquisitionStrategy

Space Based Laser will follow the Missile Defense Agency's capability	-based acquisition strategy that emphasize stesting, spiral devel	opment, and evolutionary acquisition through the use of two
yearcapabilityblocks.		

	MDAE	xhibitR -3RDT&F	: ProjectC	ostAnalys	is			Dat Fe	te bruary200	03		
APPROPRIATION/BUDGET	R-1NOMENCLATURE											
4.AdvancedComponentDo	evelopment	${f and Prototypes}({f AC})$	(D&P)		06038	83CBallis	sticMissile	DefenseB	oostDefen	seSegment		
I.ProductDevelopmentCost(\$in												
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
SpaceBasedLaser												
SBLIFXJointVentureTeam	Various	Boeing,Lockheed, TRW/ElSegundo, CA	30000								30000	
Other	Various	Various	13404								13404	
LaserTechnologyProgram	Various	Various	13404	20570	2Q						20570	
SubtotalProductDevelopment	various	various	43404	20570	20	0		0			63974	
Remarks			43404	20370		U		U			03774	
II.SupportCostsCost(\$inThous	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
SpaceBasedLaser	31									1		
SBLIFXTechnicalSupport SBLIFXTechnicalSupport	Various	Various	3444		2Q						3444	
LaserTechnologySupport	Various	Various		2286	2Q						2286	
SubtotalSupportCosts			3444	2286		0		0			5730	
Remarks										I		
III.TestandEvaluationCost(\$in	Thousands)											
	Contract	Performing	Total		FY2003		FY2004		FY2005			Target
	Method	Activity&	PYs	FY2003	Award	FY2004	Award	FY2005	Award	Costto	Total	Valueof
CostCategories:	&Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	Contract
SubtotalTestandEvaluation												
Remarks												
Remarks												

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MDAExhibitR -2ARDT&EProjectJustification								
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATU RE 0603883CBallisticMissileDefenseBoostDefenseSegment							
COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
4090/0602ProgramOperations	18172	18758	16229	16144	23201	25555	29492	31894
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

FiscalYears2002and2003arereflectedinProject4090andFiscalYears2004andoutareinProject0602.

Thisprojectcoverspersonn elandrelatedsupportcosts, statutory and fiscal requirements.

Personnelcoversgovernmentciviliansperformingprogram -wideoversightfunctionssuchascontracting,programintegration,safety,qualityandmissionassuranceatMissileDefenseAgency (MDA),ExecutingAgentswithintheUSArmySpace&MissileDefenseCommand,USArmyPEOAirandMissileDefense,USNavyPEOforTheaterSurfaceCombatants,OfficeofNaval Research.andUSAirForce.

AssistancerequiredtosupportMissileDefenseAgencypr ogram-widemanagementfunctionsisalsocontainedinthisproject. Typicaleffortsincludecostestimating; audit; technology integration acrossMDAprojects; and assessment of schedule, cost and performance, with attendant documentation of the many related programmatic issues. The requirements for this area are based on most economical and efficient utilization of contractors versus government personnel.

FiscalRequirements includere imbursables ervices acquired through the Defense Working Capital Fund (DWCF) such as accounting services provided by the Defense Finance and Accounting Services (DFAS); reserves for special termination costs on designated contracts; and provisions for terminating other programs as required. MDA has additional requirements oprovide for foreign currency fluctuations on its limited number of foreign contracts. Also includes funding for chargestocanceled appropriations in accordance with Public Law 101 -510.

Note that these funds are allocated across multiple Program Element sinaccordance with the Fiscal Year 1996 Authorization Act, which directed these funds be allocated to the program sheing supported rather than managed from a single source. This structure of ten makes it difficult to level operations efforts.

-fundall PE's while maintaining an orderly fiscal structure for executing the individual Program Operations efforts.

B.Accomplishments/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
Personnel	4492	4500	7132	5311
RDT&EArticles(Quantity)				

Providesfundingforgovernmentsa lariesandbenefitsattheMissileDefenseAgencythatareassociatedwithprogram -widesupport.

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			UNC	LASSIFI	ED					
MDAExhil	bitR -2AR	DT&EPro	jectJustifica	ation			Date February	2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentand			*	R-1NO	MENCLAT B 3CBallist	U RE icMissileDefe	nseBoostDe	fenseSegme	nt	
				FY2002		FY2003		FY2004	FY2	2005
ManagementSupport					9405	6	592	718	3	7470
RDT&EArticles(Quantity)										
executing agents (Army Space and Missile Defense Comcosts.				dNavy)includir		FY2003	•	FY2004	smanagement/ov	2005
FiscalRequirements		112002	555		474	191		3363		
RDT&EArticles(Quantity)										
ThiseffortfundsvariousrequirementsattheMissileDefe appropriations.				FY2002		sforeigncurrency FY2003		FY2004		2005
IM/ITOperations				112002	3720		192		0	0
RDT&EArticles(Quantity)							-7-			
ThiseffortpaysforInformat ionManagement/Inform ElementinFiscalYears2004 -2009.	nationTechnol	ogyrequireme	entswithintheM	issileDefenseA	gency.Theser	equirementsarem	ovedtotheMana	gementHeadqu	artersProgram	
C.OtherProgramFundingSummary										
									То	Total
	FY2002	FY2003	FY2004	FY200 5	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost

Project:4090/0602 60 of 61 **UNCLASSIFIED**

PE0603869CMeadsConcepts -Dem/Val

PE0603879CAdvancedConcepts ,

PE0603880CBallisticMissileDefense

PE0603882CBallisticMissileDefense

Evaluations and Systems

MidcourseDefenseSegment

SystemSegment

MDAExhibitR -2A(PE0603883C)